PROJECT PROFILE
ON
"UNITERRUPTED POWER SUPPLY(UPS) REPAIRING & SERVICING"

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Production Code	:	-
Quality and Standards	:	As per Customer's satisfaction.
Servicing Capacity	:	Value : Rs. 3,90,000.00
Year of Preparation	:	2006-07.
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INTRODUCTION:

The Uninterrupted Power Supply(UPS) unit is used as stand by power supply during interruption of regular power supply due to load shedding, Power failure, power fluctuations etc. The UPS provides a reliable and stable power to the equipments/systems sensitive to power variations and interruptions. It functions as voltage stabilizer and at the same time it isolates the equipment/systems from the power lines.

The UPS finds wide applications as a reliable power source to computer, telex and fax system and where continuous regular and stable power supplies are required. The major users of UPS are the industries, business houses/establishments, hospitals, banks, offices, cinema theaters, railway stations and hotels etc.

The UPS consists of a battery charger, an inverter, output transformer, a set of batteries, control circuits and transient/EMI filters.

The on-line UPS provides a conditioned output voltage when the power is on and charges the battery through the battery charger. The control circuits of UPS automatically switch over to the inverter and supply power from the batteries during power interruption/failure. The change over from mains to the battery and back to the mains supply is done automatically by the control circuits. The modern UPS employs MOSFET based inverter and pulse width modulators techniques and static switches.

MARKET POTENTIAL:

There is huge market prevailing for UPS in both on-line and off-line categories in view of fast pace of the industrialization together with the computerization. Hence, there is a large demand of UPS in the process industries, hospitals, banks, offices, cinema theatres, airports, railway stations, hotels and computer installations. The computerization in both the Government and private sector has lead to the growth of UPS market. Besides, UPS growth is also expected due to price reduction of UPS technological advancement, large replacement market, deteriorating power situation. Instrumentation which is generally computer based also need UPS to avoid complications arising due to power break-down. Increasing application of UPS with computer demands more servicing unit for prompt repair and maintenance of failure/breakdown unit to resume the work with computer in minimum possible time.

BASIS AND PRESUMPTIONS:

i) The basis for calculation of servicing capacity has been taken on single shift basis on 75% efficiency;

ii) The maximum capacity utilization on single shift basis for 300 days a year;

iii) The salaries and wages, cost of raw-materials, utilities, rents, etc. are based on the prevailing rates in and around Kolkata. These cost factors are likely to vary with time and location.

iv) Interest on term loan and working capital loan has been taken at the rate of 16% on an average. This rate may vary depending upon the policy of the financial institutions/agencies from time to time.

v) The cost of machinery and equipments refer to a particular make/model and prices are approximate.

vi) The break-even point percentage indicated is of full capacity utilization.

vii) The project preparation cost etc. whenever required could be considered under pre-operative expenses.

viii) The essential production machinery and test equipment required for the project have been indicated.

IMPLEMENTATION SCHEDULE:

The major activities in the implementation of the project has been listed and the average time for implementation of the project is estimated at 12 months:

S.No.	Name of activity	Period in months(Estimated)
1.	Preparation of project report	1
2.	Registration and other formalities	1
3.	Sanction of loan by financial institutions	3
4.	Plant and Machinery :	
	a) Placement of orders	1
	b) Procurement	2
	c) Power connection/Electrification	2
5.	Procurement of raw-materials	2
6.	Recruitment of Technical Personnel etc.	2

Notes:

1. Many of the above activities shall be initiated concurrently.
2. Procurement from the 8th month onwards.
3. When imported plant and machinery are required, the implementation period of project may vary from 12 months to 15 months.

TECHNICAL ASPECTS:

Process of Servicing:

The incoming raw-material and components are tested for required quality and specifications. Faulty unit supplied with power and checked the nature of fault and find out its location with help of schematic circuit. After diagnosis the fault, rectified it and thereafter unit tested with battery for function.

QUALITY CONTROL AND STANDARDS:

As per customer's satisfaction.

SERVICING CAPACITY (PER ANNUM) :

Quantity : -
Value : Rs.3,90,000.00

MOTIVE POWER:

Pollution Control:

The Govt. accords utmost importance to control environmental pollution. The small-scale entrepreneurs should have an environmental friendly attitude and adopt pollution control measures by process modification and technology substitution.

India having acceded to the Montreal Protocol in Sept.1992, the production and use of Ozone Depleting Substances(ODS) like Chlorofluoro Carbon(CFC), Carbon Tetrachloride, Halons and Methyl Chloroform etc. need to be phased out immediately with alternative chemicals/solvents. A notification for detailed Rules to regulate ODS phase out under the Environment Protection Act., 1986 have been put in place with effect from 19th July, 200.

The following steps are suggested which may help to control pollution in electronics industry wherever applicable:

i) In electronic industry fumes and gases are released during hand soldering/wave soldering/ Dip soldering, which are harmful to people as well as environment and the end products. Alternate technologies may be used to phase out the existing polluting technologies. Numerous new fluxes have been developed containing 2-10% solids as opposed to the traditional 15-35% solids.

ii) Electronic industry uses CFC, Carbon Tetrachloride and Methyl Chloroform for cleaning of printed circuit boards after assembly to remove flux residues left after soldering and various kinds of foams for packaging.

Many alternative solvents could replace CFC-113 and Methyl Chloroform in electronics cleaning. Other Chlorinated solvents such as Trichloroethylene, Perchloroethylene and Methylene Chloride have been used as effective cleaners in electronics industry for many years. Other organic solvents such as Ketones and Alcohols are effective in removing both solder fluxes and many polar contaminants.

ENERGY CONSERVATION:

With the growing energy needs and shortage coupled with rising energy cost, a greater thrust in energy efficiency in industrial sector has been given by the Govt. of India since 1980s. The Energy Conservation Act., 2001 has been enacted on 18th Aug., 01, which provides for efficient use of energy, its conservation and capacity building of Bureau of Energy Efficiency created under the Act.

The following steps may help for conservation of electrical energy:

i) Adoption of energy conserving technologies, production aids and testing facilities;

ii) Efficient management of process/manufacturing machineries and systems, QC and testing equipments for yielding maximum Energy Conservation;

iii) Optimum use of electrical energy for heating during soldering process can be obtained by using efficient temperature controlled soldering and de-soldering stations;

iv) Periodical maintenance of motors, compressors etc.

v) Use of power factor correction capacities. proper selection and layout of lighting system; timely switching on-off of the lights; use of compact fluorescent lamps wherever possible etc.

FINANCIAL ASPECTS:

A. Fixed Cost:

i) **Land and Building:**

Built-up area	300 sq.mtrs.
Assembly, testing and stores	250 sq.mtrs.
Office	50 sq.mtrs.
Rent payable per annum	Rs.36,000.00

ii) Machinery and Testing Equipments

S.No.	Particulars	Qty. (Nos.)	Imp/Ind.	Total (Rs.)
1.	Oscilloscope (0-50 Mhz)	1	Ind.	25,000
2.	LCR-Q Meter	1	Ind.	7,000
3.	Power Supplies (0-30v, 3 Amp.)	2	Ind.	6,000
4.	4½ digit Digital Multimeter	2	Ind.	2,000
5.	Auto Transformer	1	Ind.	3,000
6.	Rheostats	3	Ind.	6,000
7.	Testing set up (consists of volt-meter, Amp-meter, Wattmeter and Lead Batteries)	1set	Ind.	5,000
8.	Insulation Tester	1	Ind.	2,800
9.	Electrification charges @ 10% of cost of Machinery and Equipment.			52,500
10.	Tools, Jigs, fixtures		Ind.	10,000
11.	Office equipment and furniture			15.000

iii) **Pre-operative Expenses:** 5,000

Total Fixed Capital 82,000

B. Working Capital (Per Month)

i) Staff and Labour:

S.No.	Desiqnation	Nos.	Salary(Rs.)	Total(Rs.)
1.	Manager	1	5,000	5,000
2.	Clerk/typist	1	2,500	2,500
3.	Peon	1	1,500	1,500
4.	Skilled Workers	2	2,000	4,000
5.	Semi-skilled Workers	2	1,500	3,000
			Total	11,500
	Add. Perquisites @ 15% of			1, 725
			Total	13,225
			Or say	13 ,300

ii) **Raw-material Reauirement (Per Month) :**

S.No.	Particulars	Value(Rs.)
1.	ICs, Thyristor, Diode, Display, Mosfet etc.	6,400
2.	Resistors, Capacitor, Varister, Preset, Potentiometer etc.	200
3.	Transforms	1,300
4.	Relays & coils	200
5.	Electro components(connectors)	300
6.	Switches, Buttons/knobs, cable & wire etc.	50
7.	Consumable (Solder, flux)	100
	Total:	2,550

iii) **Utilities (Per Month)**

	Power	1,000
	Water	300
		Total: 1,300

iv) **Other Contingent Expenses(Per Month)**

	Rent	3,000
	Postage & Stationery	300
	Repair & Maintenance	500
	Telephone	500
	Transport charge	1,000
	Advertisement/ publicity	500
	Insurance	300
	Misc. expenses	1,500
		Total: 4,900

v)	Total Recurring Expenditure: (i+ii+iii+iv)	22,000

c) **Total Capital Investment:**

Fixed Capital	82,000
Working Capital for 3 months	66,150
	1,48,150

FINANCIAL ANALYSIS:

i) **Cost of Production Per Annum:**

Particulars	Value (Rs.)
Total Recurring Expenditure	2,64,600
Depreciation on Plant & Machinery equipment @ 10%	5,200
Depreciation on office equipment/furniture @ 20%	3,000
Depreciation on jigs & fixture	2,500
Interest on total capital investment @ 16%	23,704
Total:	**2,99,004**
Say Rs.	**3,00,000**

ii) **Turn Over (Per Annum)**

UPS repairing & Servicing 3,90,000.00

3) Profit (Per Annum) (Before Tax) 90,000.00

4) Net Profit Ratio = $\frac{\text{Profit (Per Annum) x 100}}{\text{Sales (Per Annum)}} = \frac{90{,}000 \times 100}{3{,}90{,}000.00} = 23.07\%$

5) Rate of Return = $\frac{\text{Profit (Per Annum) x 100}}{\text{Total capital investment}} = \frac{90{,}000 \times 100}{1{,}48{,}150} = 60.70\%$

6) **Break Even Points :**

Fixed Cost (Per Annum)

Particulars	Value(Rs.)
Rent	36,000
Depreciation on Plant & Machine	5,200
Depreciation on tools, zigs and fixtures @ 25%	2,500
Depreciation on office function etc. @ 20%	3,000
Insurance & Taxes	6,000
40% of salary & wages	63,840
40% of other contingent expenditure & Utilities (Excluding rent & insurance	13,920
Total	1,30,460
Or say	1,30,500

$$\text{B.E.P.} = \frac{\text{Fixed cost x 100}}{\text{Fixed Cost+Profit}} = \frac{130500 \times 100}{130500+90000} = \frac{130500 \times 100}{220500} = 59.18\%$$

ADDITIONAL INFORMATION:

a) The Project profile may be modified/tailored to suit the individual entrepreneurship qualities/ capacity, production programme and also to suit the locational characteristics, wherever applicable;

b) The Electronics Technology is undergoing rapid strides of change and there is need for regular monitoring of the national and international technology scenario. The unit may, therefore, keep abreast with the new technologies in order to keep them in pace with the developments for global competition;

c) Quality today is not only confined to the product or service alone. It also extends to the process and environment in which they are generated. The ISO-9000 defines standards for Quality Management Systems and ISO 14001 defined standards for Environmental Management System for acceptability at international level. The unit may therefore adopt these standards for global competition;

d) The margin money recommended is 25% of the working capital and requirement at an average. However, the percentage of margin money may vary as per Bank's discretion.

ADDRESSES OF MACHINERY AND EQUIPMENT SUPPLIERS:

1. M/s. Phillips India, No.7, Justice Chandra madhab Road, Kolkata-700 020.(Testing & measuring instruments).
2. M/s. International Electronics, 202, champakalal Industrial Estate, 105, Sion East, Mumbai-400 022 (Testing & measuring instruments).
3. M/s. Advance Tech Services, 56, 2nd floor, Rani Jhansi Road, New Delhi-l00 055. (Soldering iron and other tools).
4. Local Market, Kolkata.

ADDRESSES OF RAW-MATERIAL SUPPLIERS:

1. M/s. Continental Devices India Ltd., C-120, Naraina Industrial Estate, New Delhi - 110028 (Components).
2. Elco Instruments Transformer and Coil, 4/1, Madan Street, Kolkata-700 072(Transformer and coil).
3. Avomech Commercial (I) Pvt. Ltd., 2-A & B, Bright Apartments, 7, Bright Street, Kolkata-700 019 (Relays).
4. Golden Industrial Company, 74, Bentinck Street, 1st floor, Kolkata-700 001(Electro-mechanical components).
5. Calcutta PCB Printers, 51/3-A, Kalipara, Mukherjee Road, Kolkata-700 008 (Printed circuit Boards).
6. Local Market, Kolkata.

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